

ABSTRACT OF THE DISCLOSURE

SiC-IGBTs, which have an inversion-type channel with high channel resistance and have high on-voltage due to an influence from the surface state of the interface between a gate insulating film and a base layer, are required to
5 decrease the on-voltage.

An embedded collector region is partially formed in a base layer which is formed on an emitter layer of a SiC semiconductor. A channel layer is formed on the base layer
10 and the embedded collector region to constitute an accumulation-type channel. Consequently, at on time, holes are accumulated in the upper layer portion of the channel layer so that a low-resistant channel is formed. Current by the holes flows to the emitter layer through a channel from
15 the collector region and becomes a base current for an npn transistor composed of the embedded collector region, the base region and the emitter region.